

REMARKS

In response to the Office Action mailed May 19, 2004 Applicants respectfully request reconsideration. To further the prosecution of this application, claim amendments and arguments are submitted herewith. Claims 1-64 were previously pending in this application and claims 1, 21, 22, and 42 are amended herein.

Claim Rejections Under 35 U.S.C. §102

Claims 1-64 stand rejected under 35 U.S.C. §102(b) as purportedly being unpatentable over Circello (5,737,516). Applicants respectfully traverse this rejection.

Initially, Applicants would like to thank Examiner Vo for the courtesies extended during the telephone interview conducted on July 8, 2004. The substance of this interview is summarized herein.

During the telephone interview, Applicants pointed out that Circello does not disclose or suggest, “a communication link coupling the processor and debug circuit, wherein the processor is configured to transmit to the debug circuit through the communication link a plurality of bit values each representing a state of an operation in the processor including at least an operand address,” as recited in claim 1. The Examiner asserted that Circello discloses a debug circuit having a buffer 70 that captures an instruction address associated with a branch instruction.

Applicants agree that a branch instruction or a jump instruction generally includes an instruction address that indicates a memory location to which execution jumps or branches. However, Applicants believe that this instruction address is an operand value and not an operand address.

To highlight the distinction between an operand value and an operand address, a brief example is provided below.

An instruction typically specifies an operation to be performed (i.e., by a processor). The instruction may also specify operands on which the operation is to be performed. A simple example is an add instruction that aims to add two values, 5 and 7. The operation is adding and the operands are the two values to be added (i.e., 5 and 7). Thus, the operand values are 5 and 7 and the operand addresses for these values are the memory locations at which these values are

stored. For example, the value 5 may be stored in register r1 and the value 7 may be stored in register r2. Thus, the operand value is the value of the operand on which the operation is to be performed, whereas the operand address is the location in memory at which the operand value is stored.

For a branch or jump instruction, the operation is branching or jumping to a certain memory location so that execution of instructions may continue from that memory location forward. The operand associated with a branch or jump instruction is the location in memory to which execution is to branch or jump. Thus, in the case of a branch or jump instruction the operand value is a memory address. This address represents the value of the operand on which the branch or jump operation is to be performed. This address does not represent an address in memory at which an operand value is stored. Thus, the memory address associated with a branch instruction is an operand value, not an operand address.

To clarify this distinction, Applicants have amended claims 1, 21, 22, and 42 to recite that the bit values include an operand address that indicates a memory location at which an operand value is stored. Thus, claims 1, 21, 22, and 42 patentably distinguish over the branch instruction disclosed by Circello, as Circello discloses providing the operand value of an instruction, but does not disclose or suggest providing an operand address that indicates a memory location at which an operand value is stored. Accordingly, it is respectfully requested that the rejections of claims 1, 21, 22, and 42 under 35 U.S.C. §102 be withdrawn.

Claims 2-20 and 61 depend from claim 1, claim 62 depends from claim 21, claims 23-41 and 63 depend from claim 22 and claims 43-59 and 64 depend from claim 42. Each of these dependent claims is patentable for at least the same reasons as its respective independent claim. Accordingly, it is respectfully requested that the rejection of claims 2-20, 23-41, and 43-64 under 35 U.S.C. §102 be withdrawn.

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CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
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